



User Manual

Analog Camera

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1. Introduction

1.1 Product Features

The main features are as follows:

- High performance CMOS sensor
- IR cut filter with auto switch
- OSD menu with configurable parameters
- Auto white balance
- Internal synchronization
- SMART IR mode
- 3 axis adjustment

1.2 Overview

Bullet Camera

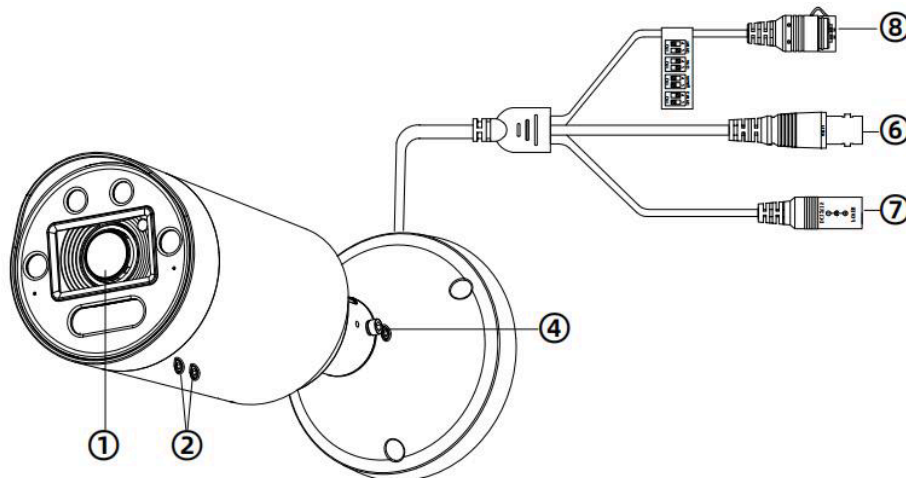


Figure 1-1 Bullet Camera

Dome Camera

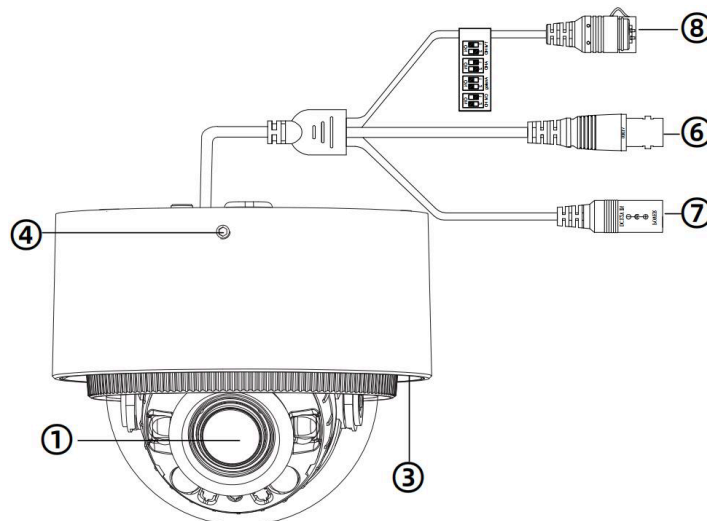


Figure 1-2 Dome Camera

Turret Camera:

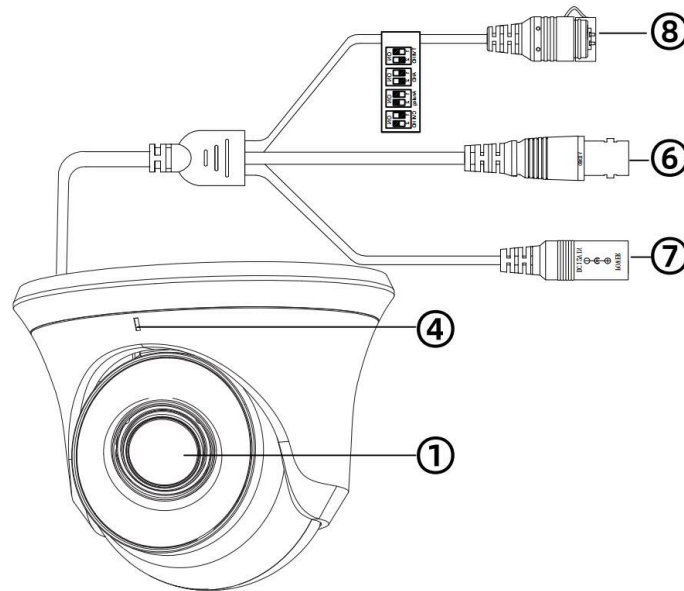


Figure 1-3 Turret Camera

Note

The type of the tail cables can be different according to the camera models. Please refer to your camera's model.

Table 1-1 Cable Tail

| No. | Name | Description |
|-----|-----------------------------|---|
| 1 | Lens | The lens of camera |
| 2 | Lens adjustment terminal | Used to adjust the focal point of the lens (Only suitable for manual zoom lens cameras) |
| 3 | Camera dome securing screws | Secure the dome to the camera housing |
| 4 | Locking screw | Locking screws to fix the case |
| 6 | BNC HD video output | BNC connector to transmit video to UVR |
| 7 | Power | DC connector for local power connection |
| 8 | DIP Switch | Switching video signal by manual switching dip switch |

2. Installation

Before you start:

- Remove the packaging and ensure all the required tools are present.
- Make sure that the device in the package is in good condition and all the assembly parts are included.
- Ensure that all related equipment is powered off during installation.
- Check the product specifications for the installation environment.
- Verify that the power supply matches the required output to avoid damage.
- Ensure the wall is strong enough to support at least three times the combined weight of the camera and the bracket.
- If the wall is cement, insert expansion bolts before installing the camera. If the wall is wooden, use self-tapping screws to secure the camera.
- If the camera does not work properly, contact your dealer or nearest service center. Do not disassemble or service the camera yourself.

2.1 Bullet Camera Installation

Steps:

1. Stick the drill template to the wall where the camera will be installed. Then drill the holes as marked on the template.

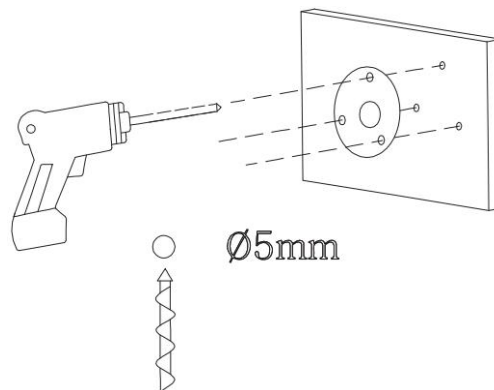


Figure 2-1 Drill Holes

Note:

Drill a cable hole when using a ceiling outlet to route the cable.

2. Connect the camera's cables correctly. Route the cables through the cable hole or the side opening.

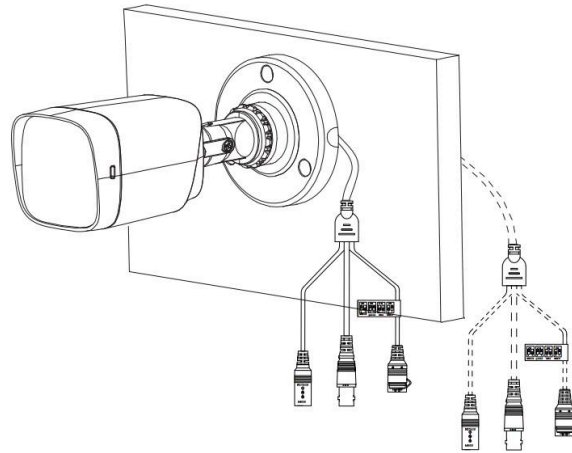


Figure 2-2 Connect Cables

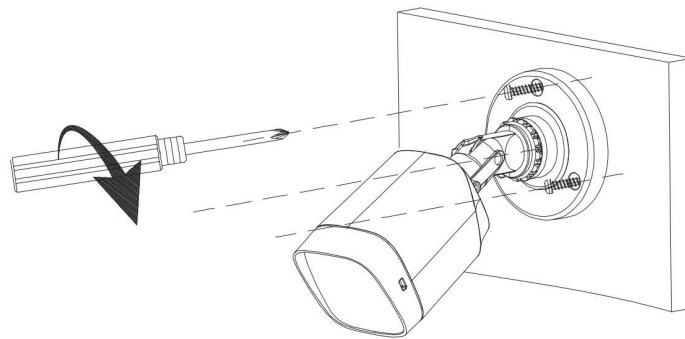


Figure 2-3 Fix Camera

Note

- The supplied screw package contains self-tapping screws and expansion bolts.
- For cement walls/ceilings, expansion bolts are required to fix the camera. For wooden walls/ceilings, self-tapping screws are required.

3. Power on the camera to check whether the image on the monitor is at the optimal angle. If not, adjust the camera according to the figure below to obtain the optimal viewing angle.

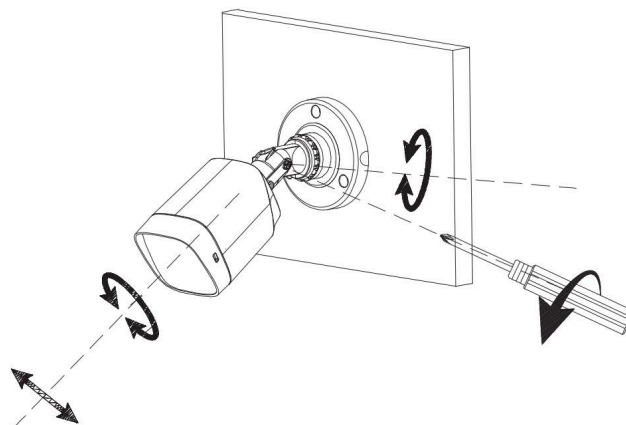


Figure 2-4 Adjust View Angle

2.2 Turret Camera Installation

Steps

1. Stick the drill template to the wall where the camera will be installed. Then drill the holes as marked on the template.

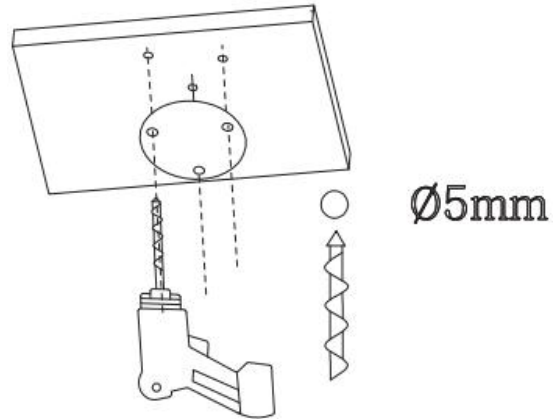


Figure 2-5 Drill Holes

Note

Drill a cable hole when using a ceiling outlet to route the cable.

2. Pull to separate the camera from the base, or loosen the locking screw with a hex key and rotate the main body, then separate the camera and the base.

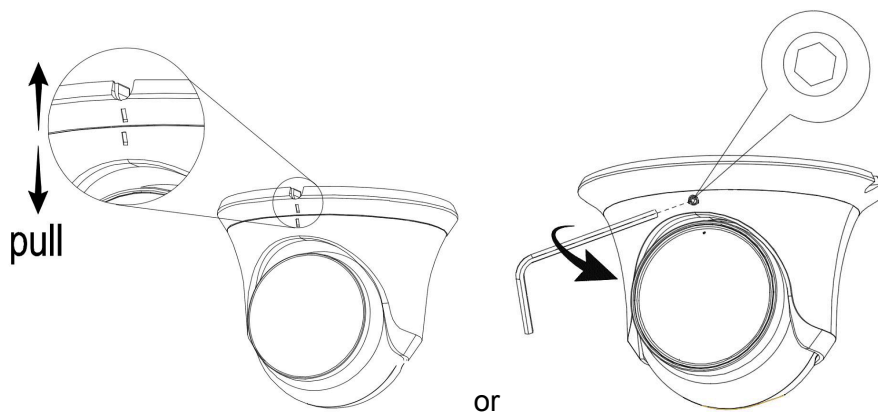


Figure 2-6 Separate the Base

3. Align the base with the screw holes drilled in Step 1, then fix the camera onto the base.

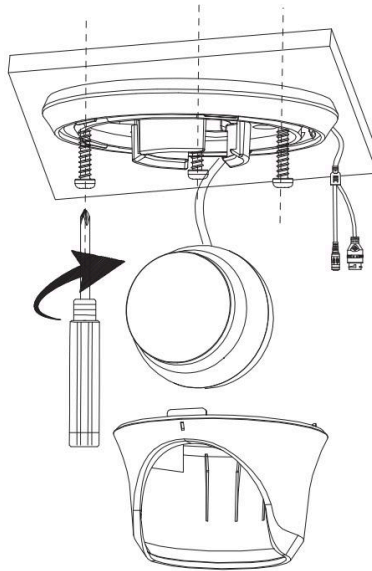


Figure 2-7 Fix the Camera

Note

- The supplied screw package contains self-tapping screws and expansion bolts.
- For cement walls/ceilings, expansion bolts are required to fix the camera. For wooden walls/ceilings, self-tapping screws are required.

4. Connect the camera's cables correctly. Route the cables through the cable hole or the side opening.

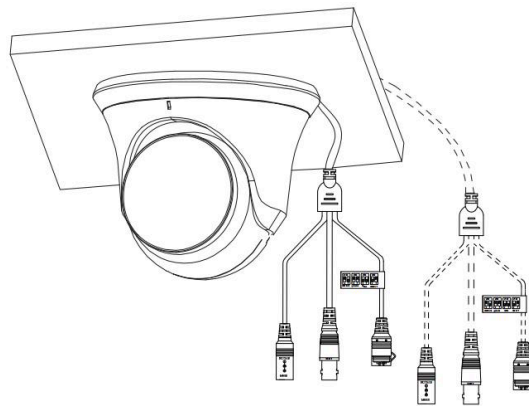


Figure 2-8 Connect Cables

5. Power on the camera to check whether the image on the monitor is at the optimal angle. If not, adjust the camera according to the figure below to obtain the optimal viewing angle.

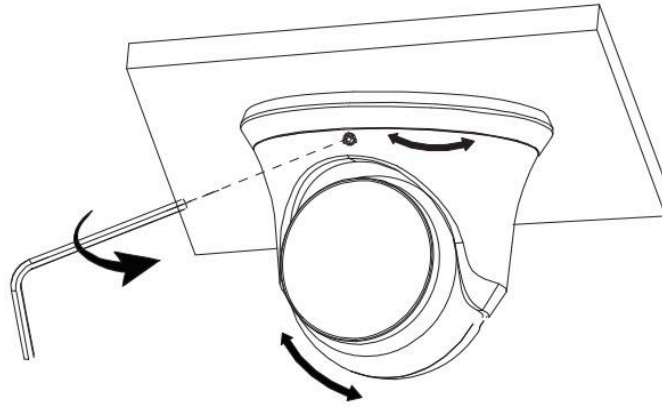


Figure 2-9 Adjust View Angle

2.3 Dome Camera Installation

Steps

1. Stick the drill template to the wall where the camera will be installed. Then drill the holes as marked on the template.

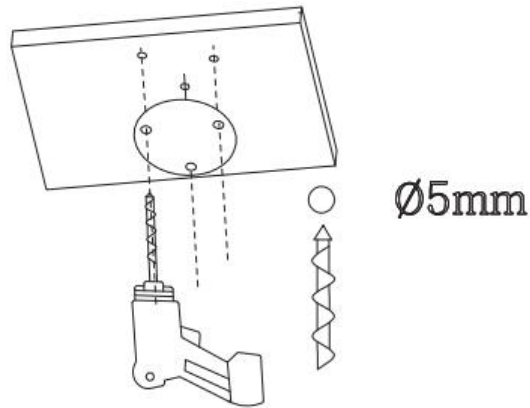


Figure 2-10 Drill Holes

2. Loosen the locking screw to remove the bracket from the bottom of the camera and fix it to the mounting surface.

Note

Some cameras (Type B) do not have a bracket. Refer to Step 4 to loosen the three hex screws and fix the camera directly to the mounting surface, then proceed to Step 6 to adjust the camera angle.

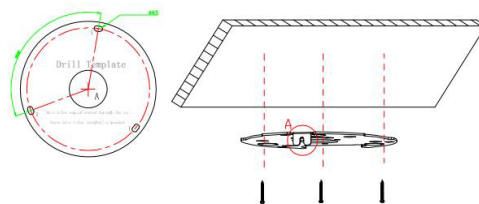


Figure 2-11 Dome Camera (Type A)

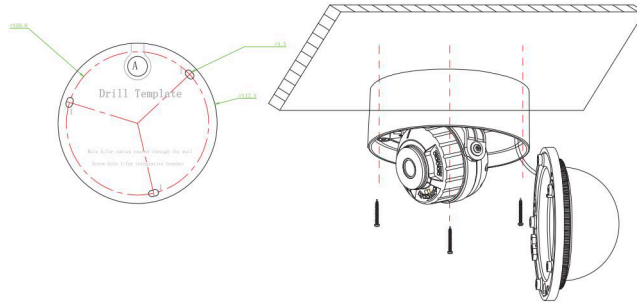


Figure 2-12 Dome Camera (Type B)

3. Attach the camera to the bracket, rotate it clockwise, and tighten the locking screw.

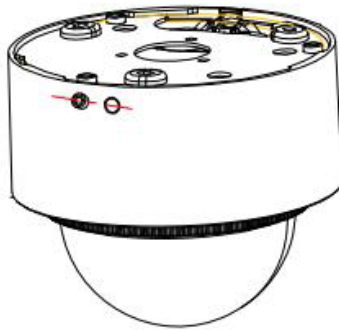


Figure 2-13 Fit Camera to Bracket

4. Connect the camera cables correctly.

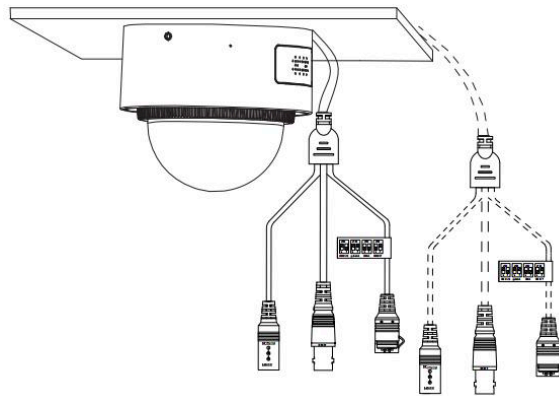


Figure 2-14 Connect Cables

5. Loosen the three hex screws to remove the dome cover.

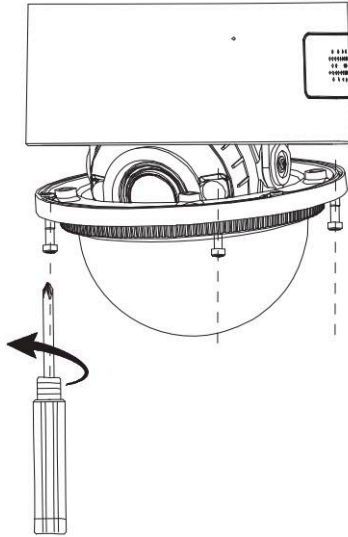


Figure 2-15 Loosen the Screws

6. Power on the camera to check whether the image on the monitor is at the optimal angle. If not, adjust the camera according to the figure below to obtain the optimal viewing angle.

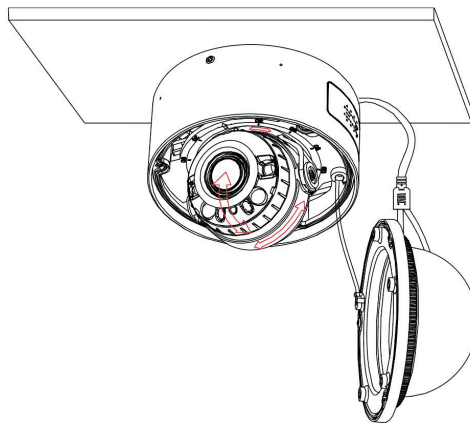


Figure 2-16 Adjust View Angle

7. Tighten the screws on the dome cover to ensure the camera is properly sealed.

Note

Make sure the cover is firmly tightened. A loose cover may cause water ingress.

3. Change Video Output Mode

Please read the information below for instructions on how to change the video output of the AHD camera.

Steps

1. Identify the product type of the camera you are using.
2. Follow the instructions to set the desired video output.

3.1 DIP Switch

The video signal can be switched manually using the DIP switch. The configurations are illustrated below.

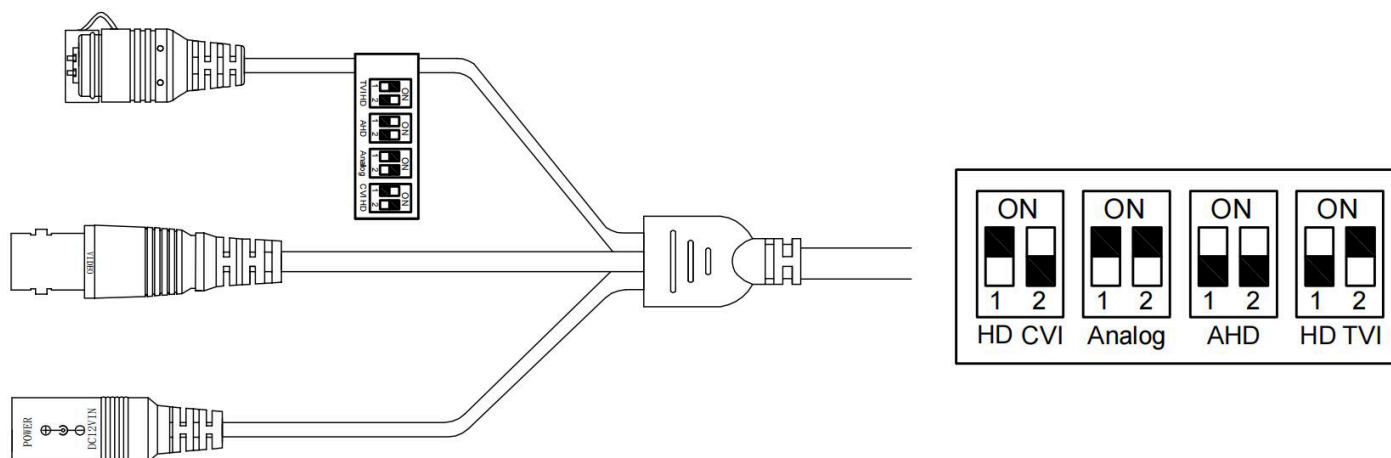


Figure 3-1 DIP Switch

Table 3-3 DIP Switch

| Type of signal represented | Mode | Description |
|----------------------------|-------------|--------------------------|
| | CVI | 1 dial up, 2 dial down |
| | CVBS | 1 dial up, 2 dial up |
| | AHD | 1 dial down, 2 dial down |
| | TVI | 1 dial down, 2 dial up |

3.2 UTC Control from UVR

Steps

1. Select the camera for which you want to change the video output settings in the preview interface.
2. Right-click and select **OSD Coaxial control**.



Figure 3-2 OSD Coaxial Control

3. UTC Control from UVR (U series Varifocal & Fixed Lens Cameras):

- (1) Click the central **MENU** button in the UI or press down on the joystick.
- (2) Move the cursor to **VIDEO SETTING** and press the central **MENU** button.
- (3) Under **HD**, navigate left or right to select **TVI**, **CVI**, **CVBS**, or **AHD** video output.
- (4) Under **Video Standard**, navigate left or right to select **4MP** or **5MP** resolution (for Q-C series, select **25fps** or **30fps** frame rate).
- (5) Go to **Reboot & Apply** to apply the changes and restart the camera.

4. UTC Control from UVR (Q series Varifocal & Fixed Lens Cameras):

- (1) Click the central **MENU** button in the UI or press down on the joystick.
- (2) Move the cursor to **FORMAT**, then navigate left or right to select **25fps** or **30fps** frame rate.
- (3) Move the cursor to **VIDEO MODE**, then navigate left or right to select **TVI**, **CVI**, **CVBS**, or **AHD** video output.
- (4) Click the central **MENU** button in the UTC UI. The camera will restart.

4. Menu Description

Access the menu by clicking the button in the OSD coaxial control interface.

Steps

1. Connect the camera to the UVR and the monitor, as shown below.

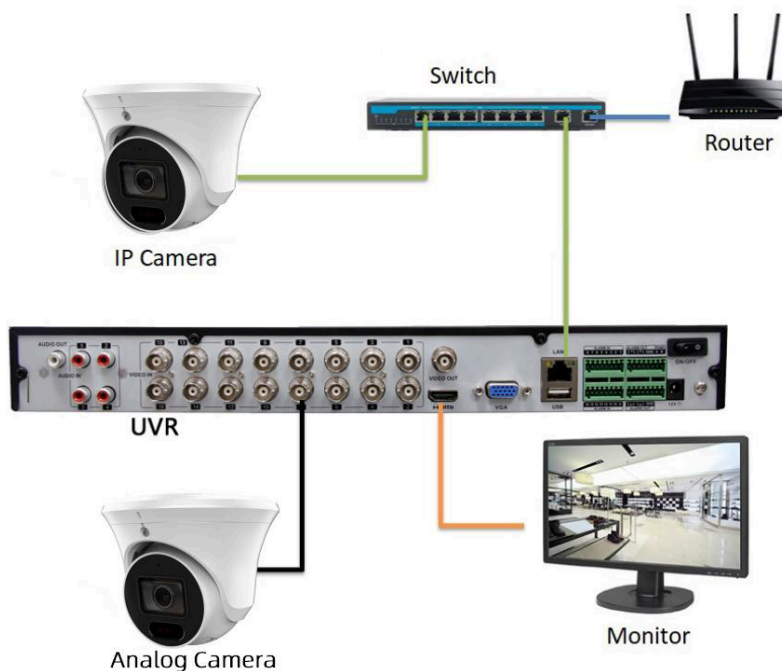


Figure 4-1 Connection

2. Power on the camera, UVR, and monitor to display the image on the monitor.
3. Right-click and select **OSD Coaxial Control**.
4. Click the central **MENU** button to open the main menu.

Note

The main menu may vary depending on the camera model.

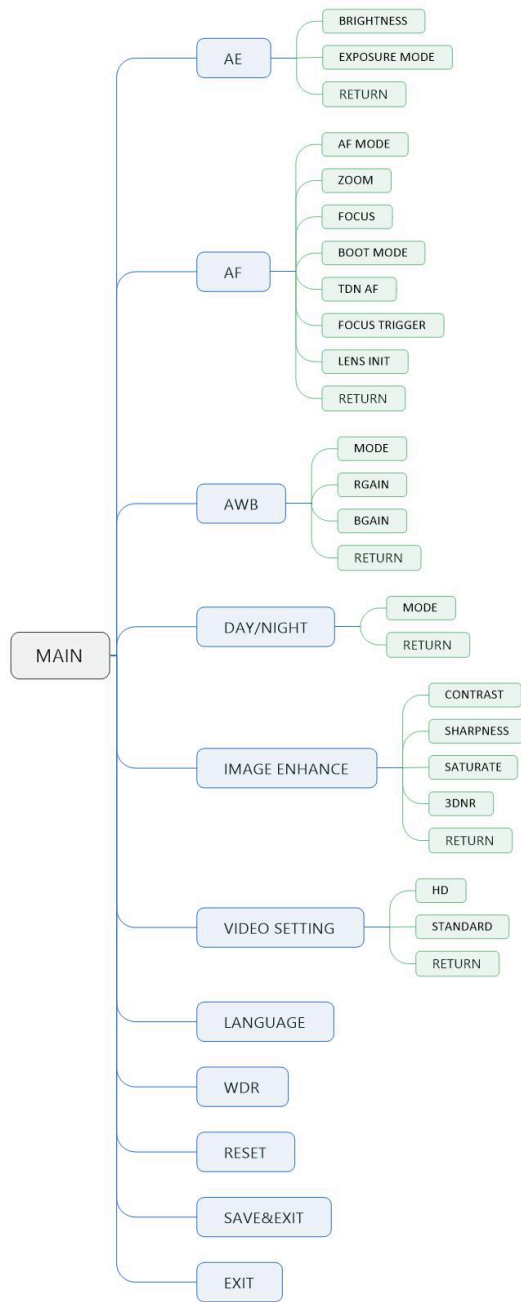


Figure 4-2 Main Menu Overview

4.1. AE

You can control brightness and exposure mode through the AE menu.

4.1.1. BRIGHTNESS

Brightness refers to the image luminance. You can set the brightness value from 0 to 100 to darken or brighten the image. The higher the value, the brighter the image.

4.1.2. EXPOSURE MODE

You can set the **EXPOSURE MODE** to **GLOBAL** or **BLC**.

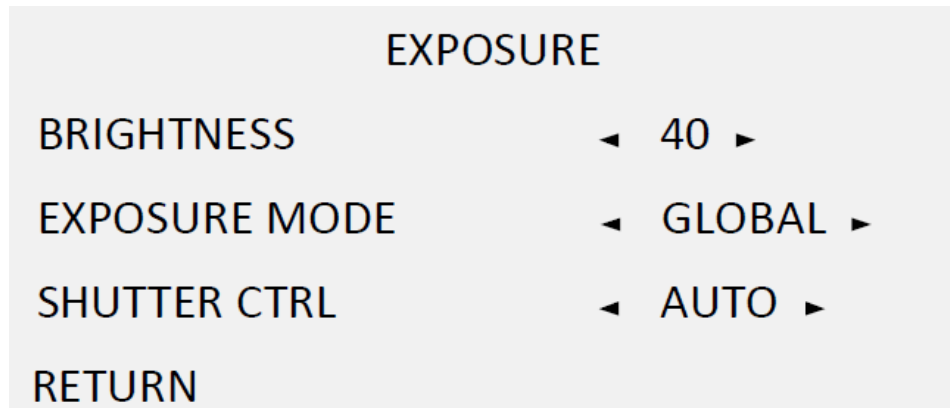


Figure 4-3 Exposure

- **GLOBAL** refers to the standard exposure mode, which adjusts lighting distribution, variations, and non-uniform processing.
- **BLC** (Backlight Compensation) compensates for illumination differences between the object and the camera to improve object visibility. However, it may cause overexposure in bright background areas.

4.2. AUTOFOCUS

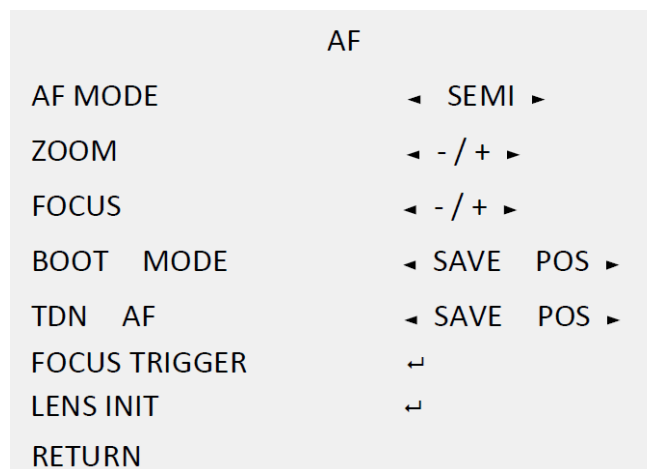


Figure 4-4 AF

4.2.1. AUTOFOCUS MODE

You can set the **AF MODE** to **SEMI**, **MANUAL**, or **AUTO**.

- In **SEMI** mode, the device performs an automatic zooming procedure after each lens adjustment to ensure image clarity. However, the focus remains unchanged even if the scene changes.
- In **MANUAL** mode, you can adjust the focus manually on the live view page.
- In **AUTO** mode, the device automatically adjusts focus as the scene changes. If proper focus cannot be achieved in AUTO mode, reduce strong light sources in the image and avoid flashing lights.

4.2.2. ZOOM

Click the **Left/Right** button to zoom the lens in or out.

4.2.3. FOCUS

- Click the **Left** button: the lens focuses on near objects, making nearby subjects clear.
- Click the **Right** button: the lens focuses on distant objects, making far-away subjects clear.

4.2.4. BOOT MODE

Defines the default focal position of the motorized zoom lens when the camera starts.

- **WIDE END**: Allows capturing a wider field of view. This mode is also suitable for obtaining wide-angle images in confined spaces.
- **TELE END**: Produces a larger image than a standard lens at the same distance. Suitable for capturing distant objects.
- **SAVE POS**: Restores and maintains the previously saved lens position.

4.2.5. FOCUS TRIGGER

Move the cursor to **FOCUS TRIGGER** and press the **Menu** button to initiate automatic lens focusing.

4.2.6. LENS INIT

Lens initialization adjusts the focus automatically based on the sensor signal, recalibrating the current focus position to locate the optimal focus point.

This function is used to correct focus motor misalignment or cumulative offset errors that may cause inaccurate focus positioning.

4.3. AWB

White balance is the camera's color rendering function. It adjusts the color temperature according to the environment to eliminate unrealistic color casts in the image.



Figure 4-5 AWB

- You can set the **MODE** to **PRO** or **GRAY WORLD**.
- If the image color is inaccurate, it can be adjusted manually. **RGAIN** can be set from 0 to 100; higher values increase red tones in the image. Similarly, **BGAIN** increases blue tones.

4.4. DAY/NIGHT

The **DAY/NIGHT** function provides color images in day mode and black-and-white images in night mode. The switching mode is configurable.

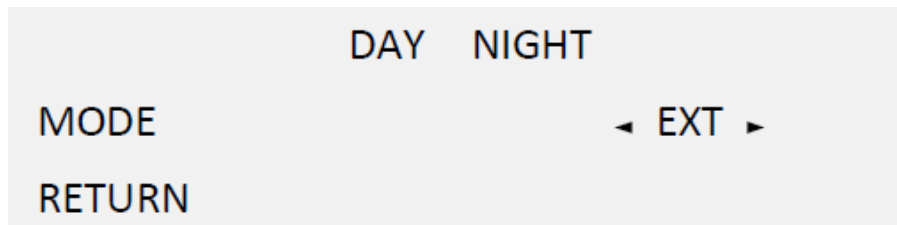


Figure 4-6 Day/Night

4.5. IMAGE ENHANCE



Figure 4-7 Image Enhance

4.5.1. CONTRAST

This function enhances the differences in color and brightness between objects in the image. When set to manual mode, the **CONTRAST** value can be adjusted from 0 to 20.

4.5.2. SHARPNESS

Sharpness determines the level of detail in the image. When set to manual mode, the **SHARPNESS** value can be adjusted from 0 to 20.

4.5.3. SATURATE

Adjust this setting to change the color saturation. When set to manual mode, the **SATURATE** value can be adjusted from 0 to 20.

4.5.4. 3DNR

The **3DNR** (Digital Noise Reduction) function reduces noise, especially when capturing moving images under low-light conditions. This function helps produce clearer and more accurate images.

You can set the **3DNR** value from 0 to 20.

4.6. VIDEO SETTING

Set the video format in different modes.

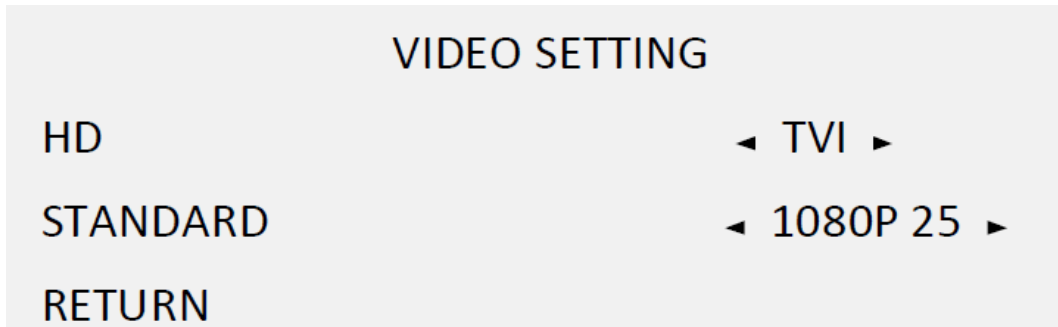


Figure 4-8 Video Setting

- You can select video formats such as **1080P @ 25 fps**, **4 MP @ 25 fps**, **4 MP @ 30 fps**, etc., in **TVI/AHD/CVI** modes. Refer to the actual interface for available configuration options.
- In **CVBS** mode, only **PAL** or **NTSC** can be selected.

4.7. LANGUAGE

Move the cursor to **LANGUAGE**, then click **Left/Right** to change the display language.

4.8. WDR

The **WDR** (Wide Dynamic Range) function enables the camera to produce clear images under backlight conditions. When both very bright and very dark areas appear simultaneously in the field of view, WDR balances the overall brightness and enhances image details.

4.9. SAVE & EXIT

Move the cursor to **SAVE & EXIT** and press **Menu** to save the settings and exit the menu.

4.10. EXIT

Move the cursor to **EXIT** and press **Menu** to exit the menu.

Legal Information

© 2024 **Inaxsys Security Systems Inc.** All rights reserved.
Legend NX is a trademark of Inaxsys Security Systems Inc.

About This Manual

This manual provides instructions for the installation, configuration, operation, and maintenance of the product.

All images, diagrams, and illustrations in this manual are provided for reference purposes only and may differ from the actual product. The information contained herein is subject to change without prior notice due to firmware updates or product improvements. For the latest version of this manual, please visit the official Inaxsys website.

This manual is intended for use by qualified professionals. Installation and servicing should be performed by trained personnel only.

Trademarks

Legend NX and all related trademarks, logos, and brand names are the property of **Inaxsys Security Systems Inc.** and may be registered in applicable jurisdictions.

Disclaimer

To the maximum extent permitted by applicable law, this manual and the product described herein, including all hardware, software, and firmware, are provided **“as is”** and **“with all faults.”**

Inaxsys makes no warranties, express or implied, including but not limited to warranties of merchantability, fitness for a particular purpose, or satisfactory quality. Use of the product is at your own risk.

In no event shall Inaxsys be liable for any indirect, incidental, special, or consequential damages, including but not limited to:

- loss of business profits
- business interruption
- loss or corruption of data
- system failure
- loss of documentation

whether arising from breach of contract, tort (including negligence), product liability, or otherwise, even if Inaxsys has been advised of the possibility of such damages.

You acknowledge that internet-based products and systems may be subject to inherent security risks. Inaxsys shall not be held responsible for abnormal operation, privacy breaches, or damages resulting from cyber-attacks, hacking, viruses, or other network-related threats. However, Inaxsys will provide reasonable technical support where applicable.

You agree to use this product in compliance with all applicable laws and regulations. You are solely responsible for ensuring that your use does not infringe upon the rights of third parties, including but not limited to intellectual property rights, privacy rights, and data protection regulations.

This product must not be used for any prohibited purposes, including but not limited to:

- development or production of weapons of mass destruction
- chemical or biological weapons activities
- unsafe nuclear activities or nuclear fuel cycle misuse
- activities that violate human rights

In the event of any conflict between this manual and applicable law, the applicable law shall prevail.

FCC Information

Please note that any changes or modifications not expressly approved by the party responsible for compliance may void the user's authority to operate this equipment.

FCC Compliance

This equipment has been tested and found to comply with the limits for a **Class A digital device**, pursuant to **Part 15 of the FCC Rules**. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Conditions

This device complies with **Part 15 of the FCC Rules**. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Safety Instructions

- Proper configuration of all passwords and security settings is the responsibility of the installer and/or end user.
- In the use of this product, you must comply with all applicable electrical safety regulations for your country and region.
- Firmly connect the power plug to the outlet. Do not connect multiple devices to a single power adapter.
Always power off the device before connecting or disconnecting accessories and peripherals.
- **Danger:** Shock hazard. Disconnect all power sources before performing maintenance.
- The equipment must be connected to a properly grounded (earthed) mains outlet.
- The socket outlet should be installed near the equipment and remain easily accessible.
- ⚡ Indicates hazardous live voltage. External wiring connected to terminals must be installed by a qualified person.
- **Warning:** Do not install the equipment in an unstable location. The device may fall, causing serious injury or death.
- The input voltage must comply with **SELV (Safety Extra Low Voltage)** and **LPS (Limited Power Source)** requirements in accordance with **IEC 62368**.
- High leakage current. Ensure proper grounding before connecting to the power supply.
- If smoke, unusual odor, or abnormal noise is detected, immediately power off the device, unplug it, and contact technical support.
- For optimal performance, use the device with a UPS (Uninterruptible Power Supply) and manufacturer-recommended hard drives.
- This product contains a coin/button cell battery. If swallowed, it can cause severe internal burns within two hours and may result in death.
- This equipment is not suitable for use in locations where children are likely to be present.
- Risk of explosion if the battery is replaced with an incorrect type.
- Improper battery replacement may disable safety protections (especially for certain lithium battery types).
- Do not dispose of the battery in a fire or a hot oven. Do not crush, puncture, or cut the battery, as this may result in explosion.
- Do not expose the battery to extremely high temperatures, which may result in explosion or leakage of flammable substances.
- Do not expose the battery to extremely low air pressure, which may result in explosion or leakage of flammable substances.
- Dispose of used batteries in accordance with local regulations.
- Keep body parts away from moving components such as fan blades and motors. Disconnect the power source before servicing.

Preventive and Safety Guidelines

Before installing and operating this device, please review the following guidelines:

- This device is designed for **indoor use only**. Install it in a well-ventilated, dust-free environment away from liquids.
- Ensure the recorder is securely mounted on a rack or stable surface. Dropping or subjecting the unit to strong impacts may damage internal components.

- Do not expose the equipment to dripping or splashing liquids. Do not place objects filled with liquids (such as vases) on top of the device.
- Do not place open flame sources (such as lit candles) on or near the equipment.
- Do not obstruct ventilation openings. Avoid covering the device with materials such as newspapers, cloths, or curtains.
Do not place the device on soft surfaces such as beds, sofas, or rugs that may block airflow.
- Maintain a minimum clearance of **200 mm (7.87 inches)** around the device to ensure proper ventilation.
- For applicable models, ensure correct wiring of terminals when connecting to an AC mains power supply.
- Certain models may be designed or configured for connection to an IT power distribution system. Verify compatibility before installation.
- The battery symbol indicates the battery holder and the correct polarity/positioning of the cell(s).
- The “+” and “-” symbols indicate the positive and negative terminals for direct current (DC) connections.
- Use only power supplies specified in this manual or provided by Inaxsys.
- The USB port is intended for connecting a mouse, keyboard, USB flash drive, or Wi-Fi dongle only.
- Avoid contact with sharp edges or corners of the equipment.

